CLICK HERE TO SUBSCRIBE TO OUR YOUTUBE CHANNEL

JOB JUNCTION

https://thejobjunction.in/

NEVER MISS OUT ANY JOB NOTIFICATION

FOR PREPARING G.K , CURRENT AFFAIRS & ENGLISH ⬇

CLICK ON THE ICONS AND CONNECT WITH US ON SOCIAL MEDIA

TS Southern Junior Lineman Exam Model Paper 6

Electrical Engineering

1. If the magnetic susceptibility of a specimen is small and positive, the specimen is

1. Diamagnetic
2. Paramagnetic
3. Ferromagnetic
4. Non-magnetic

2. Manganese ferrite is a 1 : 1 mixture of

1. Manganese nitride and iron oxide
2. Manganese oxide and iron nitride
3. Manganese nitride and iron sulphide
4. Manganese oxide and iron sulphide

3. When a ferromagnetic substance is magnetized, small changes in dimensions occur. Such a phenomenon is known as

1. Magnetic hysteresis
2. Magnetic expansion
3. Magnetostriction
4. Magneto-calorisation

4. In ferromagnetic , anti-ferromagnetic and ferromagnetic materials, the atomic thermal motions counteract the coupling forces between the adjacent atomic dipole moments, thereby causing

1. Some dipole misalignment regardless of whether an external field is present
2. Increase in dipole alignment regardless of whether an external field is present
3. No effect on dipole alignment
4. Atoms tend to de-randomize the direction of moments

5. The Hall effect voltage in intrinsic

silicon

1. Is positive
2. Is zero
3. Is negative
4. Changes its sign based on application of magnetic field

6. Most outstanding property of indium antimonide is

1. A very wide range gap
2. High resistivity at room temperature
3. High carrier mobility
4. Very low conductivity at room temperature

7. Two conductors of a transmission line carry equal current I in opposite directions. The force on each conductor is proportional to

1. I
2. I^2
3. The distance between the conductors
4. I^3

8. A conductor of length 100cm moves at right angle to a uniform field flux density of 1.5 Wb/m^2 with a velocity of 50 m/s. The e.m.f. induced in the conductor will be

1. 150 V
2. 75 V
3. 50 V
4. 37.5 V

9. Maxwell equations

1.Are extension of the works of Gauss, Faraday and Ampere

2.Help studying the application of electrostatic – fields only

3.Can be written in integral form and point form

4.Need not be modified depending upon the media involved in the problem

Which of the above statements are correct?

1. 1 and 3
2. 1 and 4
3. 2 and 3
4. 3 and 4

10. Fermion particles obey

1. Maxwell-Boltzmann statistics
2. Bose-Einstein statistics

TS Southern Junior Lineman Exam Model Paper 6

3. Pauli's exclusion principle
4. Heisenberg's uncertainty principle

11. The complex permeability and resulting wave losses are due to

1. Free electron or ion oscillation and dipole relaxation
2. Free electron oscillation and relaxation of free space charge
3. Bound electron oscillation and relaxation of free space charge
4. Bound electron or ion oscillation and dipole relaxation

12. A 10 GHz plane wave travelling in free space has amplitude 15 V/m. The propagation coefficient β is

1. 209.4 rad/m
2. 173.6 rad/m
3. 543.5 rad/m
4. 3.97×10^{-2} rad/m

13. A galvanometer has a current sensitivity of 1 A/mm and a critical damping resistance of 1 kΩ. The voltage sensitivity and the meg-ohm sensitivity respectively are

1. 1 mV/mm and 1 MΩ
2. 1 mV/mm and 2 MΩ
3. 2 mV/mm and 2 MΩ
4. 2 mV/mm and 1 MΩ

14. Electrostatic voltmeters are particularly suitable for measuring high voltages because the construction is simplified due to

1. Large electrostatic forces
2. Small electrostatic forces
3. Large value of current
4. Small value of current

15. A moving coil instrument of resistance 5Ω requires a potential difference of 75 mV to give a full scale deflection. The value of shunt resistance needed a give a full scale deflection at 30A is

1. 2.5 mΩ
2. 9.99 mΩ
3. 5 Ω
4. 9.95 mΩ

16. The function of input attenuators is measuring instruments , like VTVM and CRO, is to

1. Increase the input impedance
2. Attenuate the frequency range
3. Attenuate the input signal amplitude without altering the frequency contents
4. Attenuate the input impedance

17. With the help of which bridge are the capacitance and dielectric loss of a capacitor generally measured?

1. De Sauty
2. Wien series
3. Anderson
4. Schering

18. The deflection of a hot wire instrument depends on

1. Instantaneous value of alternating current
2. Average value of current
3. RMS value of alternating current
4. Voltage instead of current

19. Which of the following statements regarding binary counter are correct?

1.Clock inputs of all flip-flops of a synchronous counter are applied from the same source whereas those in an asynchronous counter are from different sources.
2.Asynchronous counter has ripple effects whereas synchronous counter has not.

3.Only J-K flip-flops can be used in synchronous counter whereas asynchronous counter can be designed with any type of flip-flops.

1. 1, 2 and 3
2. 1 and 3 only
3. 2 and 3 only
4. 1 and 2 only

20. The decimal equivalent of Binary 110.001 is

1. 6.25
2. 6.125
3. 62.5

TS Southern Junior Lineman Exam Model Paper 6

4. 0.612

21. Given $(125)_R = (203)_5$. The value of radix R will be

1. 16
2. 10
3. 8
4. 6

22. The 2's complement of $(25.639)_{10}$ is

1. 74.360
2. 0.6732
3. 6.732
4. 7.436

23. Consider the following statements:

1.When two unsigned numbers are added, an overflow is detected from the carry into the most significant position.

2.An overflow does not occur if the two numbers added are both negative.

3.If the carry into the sign bit position and carry out of the sign bit position are not equal, an overflow condition is produced.

Which of the above statements is/are correct?

1. 1, 2 and 3
2. 1 only
3. 2 only
4. 3 only

24. Which of the following statements are correct?

1.DRAM offers reduced power consumption.

2.An associative memory is cheaper than RAM.

3.The fastest and most flexible cache organization uses content addressable memory.

4.The address generated by a segmented program is called physical address.

1. 1 and 3
2. 1 and 4
3. 2 and 3
4. 2 and 4

25. In a JFET, operating above pinch-off voltage, the

1. Drain current increases steeply
2. Drain current remains practically constant
3. Drain current starts decreasing
4. Depletion region reduces

26. If V_{cc} = 18V, voltage divider resistances R_1 = 4.7 kΩ and R_2 = 1500 Ω, what is the base bias voltage?

1. 8.70 V
2. 4.35 V
3. 2.90 V
4. 0.70 V

27. An SCR has an anode supply of sine voltage $200V_{r.m.s.}$, 50 Hz applied through a 100 Ω resistor and fired at an angle of 60°. Assuming no voltage drop, the r.m.s. value of the output voltage is nearly

1. 90 V
2. 126 V
3. 166 V
4. 200 V

28. In a GTO, anode current begins to fall when gate current

1. Is negative peak at time *t = 0*
2. Is negative peak at time *t* = storage period
3. Just begins to become negative at *t = 0*
4. Just begins to become positive at *t = 0*

29. An SCR is turned off when its turn-off time is

1. less than the circuit time constant
2. greater than the circuit time constant
3. less than the circuit turn-off time
4. greater than the circuit turn-off time

30. The bandwidth of a digitally recorded signal primarily depends upon

1. The physical properties of the system components processing the signal

TS Southern Junior Lineman Exam Model Paper 6

2. The frequency at which the signal is sampled
3. The frequency of the clock signal that is used to encode binary values responding the signal
4. The frequency of the noise affecting signal quality

31. The gain and distortion of an amplifier are respectively 150 and 5%. When used with a 10% negative feedback the % distortion would be

1. $\frac{5}{16}$
2. $\frac{9}{16}$
3. 6
4. 8

32. A two stage amplifier with negative feedback

1. Can become unstable for larger values of β
2. Becomes unstable at high and very low frequencies if A is large
3. Becomes unstable when the pole frequencies become complex
4. Is always unstable

33. In case of amplifiers, which coupling gives the highest gain?

1. Transformer coupling
2. Resistance coupling
3. Impedance coupling
4. Capacitance coupling

34. Active load is primarily used in the collector of the differential amplifier of an OPAMP

1. To increase the output resistance
2. To increase the differential gain A
3. To handle large signals
4. To provide symmetry

35. The pulse width out of a one shot multi-vibrator increases when the

1. Supply voltage increases
2. Timing resistor decreases
3. UTP decreases
4. Timing capacitance increases

36. If the output of a logic gate is '1' when all its inputs are at logic '0', the gate is either

1. A NAND or a NOR
2. An AND or an EX-NOR
3. An OR or a NAN
4. An EX-OR or an EX-NOR

37. For the discrete signal $x[n] = a^n u[n]$ the z-transform is

1. $\frac{z}{z+a}$
2. $\frac{z - a}{z}$
3. $\frac{z}{a}$
4. $\frac{z}{z - a}$

38. If the power spectral density is $\frac{nW}{2\ Hz}$ and the auto correlation function is defined by $R(\tau) = \frac{n}{2} \int_{-\infty}^{\infty} e^{j\omega t}\, df$. The integral on the right represents the Fourier transform of

1. Delta function
2. Step function
3. Ramp function
4. Sinusoidal function

39. The following equation describes a linear time-varying discrete time system

1. $y(k+2) + ky(k+1) + y(k) = u(k)$
2. $y(k+2) + ky^2(k+1) + y(k) = u(k)$
3. $y(k+2) + 3y(k+1) + 2y(k) = u(k)$
4. $y(k+2) + y^2(k+1) + ky(k) = u(k)$

40. Match List-I and List-II and select the correct answer using the code given below the lists:

List-I	List-II

TS Southern Junior Lineman Exam Model Paper 6

A. Even Signal	1. $x(n) = \left(\frac{1}{4}\right)^n u(n)$
B. Causal Signal	2. $x(-n) = x(n)$
C. Periodic Signal	3. $x(t)u(t)$
D. Energy Signal	4. $x(n) = x(n+N)$

	A	B	C	D
1.	2	3	4	1
2.	1	3	4	2
3.	2	4	3	1
4.	1	4	3	2

41. The natural response of an LTI system described by the difference equation y(n)-1.5y(n-1)+0.5y(n-2) = x(n) is

1. $y(n) = 0.5u(n) - 2(0.5)^n u(n)$
2. $y(n) = 0.5u(n) - (0.5)^n u(n)$
3. $y(n) = 2u(n) - 0.5(0.5)^n u(n)$
4. $y(n) = 2u(n) - (0.5)^n u(n)$

42. A waveform is given by ϑ(t) = 10 sin (2π) 100t What will be the magnitude of the second harmonic in its Fourier series representation?

1. 0V
2. 20V
3. 100V
4. 200V

43. Which of the following points is not on the root locus of a system with the given open loop transfer function?

$$G(s)H(s) = \frac{K}{s(s+1)(S+3)}$$

1. $s = -j\sqrt{3}$
2. $s = -1.5$
3. $s = -3$
4. $s = -\infty$

44. The effect of integral controller on the steady-state error e_{ss} and that on the relative stability R_s of the system is

1. Both are increased
2. e_{ss} is increased but R_s is reduced
3. e_{ss} is reduced but R_s is increased
4. both are reduced

45. The state equations in the phase variable canonical form can be obtained from the transfer function by

1. Cascade decomposition
2. Direct decomposition
3. Inverse decomposition
4. Parallel decomposition

46. The transfer function of a zero order hold given by

1. $\frac{1}{s}$
2. $1 - e^{-Ts}$
3. $s(1 - e^{-Ts})$
4. $\frac{1-e^{-Ts}}{s}$

47. With negative feedback, the system stability and system gain respectively

1. Increases and increases
2. Increases and decreases
3. Decreases and increases
4. Decreases and decreases

48. A discrete time system is stable if all the roots of the characteristic equation lie

1. Outside the circle of unit radius
2. Within the circle of unit radius
3. Outside of circle of radius equal to 3 units
4. On the circle of infinite radius

49. The voltage regulation of a transformer having 2% resistance and 5% reactance, at full load, 0.8 pf lagging is

1. 4.6%
2. -4.6%

TS Southern Junior Lineman Exam Model Paper 6

3. -1.4%
4. 6.4%

50. If the percentage impedances of the two transformers working in parallel are different then

1. Transformers will be overheated
2. Power factors of both the transformers will be same
3. Parallel operation will not be possible
4. Parallel operation will still be possible

51. "A time-varying flux causes an induced electromotive force". What law does this statement represent?

1. Ampere's law
2. Faraday's law
3. Lens'z law
4. Field form of Ohm's law

52. Assuming a uniform distribution of current over the armature surface conductors, the shape of the resultant armature m.m.f. in space of a loaded dc machine is symmetrical

1. Triangular wave with its peak along the inter-polar axis
2. Triangular wave with its peak along the pole axis
3. Rectangular wave with its central axis coinciding with the inter-polar axis
4. Rectangular wave with its central axis coinciding with the pole axis

53. A dc series motor with a resistance between terminals of 1 Ω, runs at 800 rpm from a 200 V supply taking 15 A. If the speed is to be

reduced to 475 rpm for the same supply voltage and current the additional series resistance to be inserted would be approximately

1. 2.5 Ω
2. 3 Ω
3. 4.5 Ω
4. 5 Ω

54. In synchronous motor, 'V' curves present the variation of

1. Armature current with excitation (field)
2. Armature current with maximum power developed
3. Field excitation with stalling torque
4. Field excitation with minimum power developed

55. Match List-I and List-II and select the correct answer using the code given below the lists:

List-I	List-II
A.Moderator	1. Boron
B.Control rod	2. Critically damped
C.Coolant	3. Graphite
D.Shield	4. Sodium

	A	B	C	D
1.	3	1	4	2
2.	2	1	4	3
3.	3	4	1	2
4.	2	4	1	3

56. A synchronous generator connected to an infinite bus is supplying electric power at unit power factor to the bus. If the field current is increased

1. Both the active and reactive power output of the machine will remain unchanged
2. The active power of the machine will remain unchanged but the machine will also supply lagging reactive power
3. The active power of the machine will increase but the machine will draw leading reactive power from the bus
4. The active power of the machine will remain unchanged but the machine will also supply leading reactive power

57. The following is not an advantage of dc transmission:

1. No charging current
2. No skin effect
3. No stability problem
4. Cheap convertors

58. Power transmission lines are transposed to

TS Southern Junior Lineman Exam Model Paper 6

reduce

1. Skin effect
2. Ferranti effect
3. Transmission loss
4. Interference with neighboring communication lines

59. Reactive power compensation is applied at midpoint of an EHV line of total reactance 0.2 pu so as to maintain the voltage there at 0.98 pu. The voltage at both the ends of the line is 1∠0° pu. The steady state power transfer limit, in pu, is

1. 2.45
2. 5
3. 9.8
4. 19.6

60. In Gauss-Seidal low flow method, the number of iterations may be reduced if the correction in voltage at each bus may be multiplied by

1. Gauss constant
2. Acceleration factor
3. Blocking factor
4. Lagrange multiplier

61. How can the 3rd harmonic current be filtered in Thyristor-controlled reactor?

1. By connecting in delta
2. By connecting in star
3. By connecting in star-delta
4. None of the above

62. For a 1-phase full-bridge inverter fed from 48V dc and connected to load resistance 2.4 Ω, the rms value of fundamental component of output voltage is

1. 20 V
2. 21.6 V
3. 34.4 V
4. 43.2 V

63. In data acquisition system, analog data acquisition system is used

1. for narrow frequency width, while digital data acquisition system is used when wide frequency width is to be monitored
2. for wide frequency width, while digital data acquisition system is used when narrow frequency width is to be monitored
3. when quantity to be monitored varies slowly, while its counterpart is preferred if the quantity to be monitored varies very fast
4. when quantity to be monitored is time-variant, while digital data acquisition system is preferred when quantity is time invariant

64. During the measurement of resistance by Carey Foster bridge, no error is introduced due to

1.contact resistance
2. Connecting leads
3.thermoelectric e.m.f.

which of the above are correct?

1. 1 and 2 only
2. 1 and 3 only
3. 2 and 3 only
4. 1,2 and 3

65. Which of the following is true for the complete response of any network voltage or current variables for a step excitation to a first-order circuit?

1. It has the form at $k_1 e^{-at}$
2. It has the form k
3. It may have either the form (a) or the form of (a) plus (b)
4. It has the form e^{+at}

General knowledge

66. Which one among the following was the result of the First Anglo Maratha war of 1775-82 ?

1. the British won the war
2. the Marathas won the war

TS Southern Junior Lineman Exam Model Paper 6

3. there was no victory for either side
4. it helped Hyder Ali to gather strength because the British and Marathas were engaged in a mutual war

67. Which one among the following was a reason for which the French could not succeed in India in 18th century ?

1. they sided with the weak Indian sides such as Chanda sahib and Muzafar Jang
2. duplex was called back at a crucial time
3. they conspired against the Indian powers
4. their trading company was heavily dependent on the French Government

68. 'The Boston Tea Party' took place in:

1. 1773
2. 1973
3. 1770
4. 1776

69. Which of the following important rivers of India does not originate from the Western Ghats?

1. Cauvery
2. Godavari
3. Mahanadi
4. Krishna

70. Which of the following statement is incorrect?

1. Roaring forties are the southern latitudes where weste
2. Monsoons are local seasonal winds
3. Doldrum belt lies between N and S latitudes
4. Horse latitudes are found between trade winds and westerlies

71. What is Net National Product

1. the money value of final goods ands services produced annually in the economy
2. the money value of annual service generation in the economy
3. the money value of tangible goods produced annually in the economy
4. The money value of tangible goods available in the economy

72. Under which one of the Ministries of Government of India does the Food and Nutrition Board work?

1. Ministry of Agriculture
2. Ministry of Health and Family Welfare
3. Ministry of Women & Child Development
4. Ministry of Rural Development

73. Which of the following is the leading Rice crop producing district in Telangana State?

1. Nalgonda
2. Nizamabad
3. Karimnagar
4. Warangal

74. Second largest district in Telangana State, area - wise is

1. Mahaboobnagar
2. Adilabad
3. Karimnagar
4. Khammam

75. Least Urbanized district in Telangana as per 2011 Cesus is

1. Adilabad
2. Nalgonda
3. Mahaboobnagar.
4. Medak

76. In a common emitter amplifier the input signal is applied across

1. anywhere
2. emitter-collector
3. collector-base
4. base-emitter

77. In countries nearer to polar region, the roads are sprinkled with $Cacl_2$. This is

1. to minimise the wear and tear of the roads
2. to minimise the snow fall

TS Southern Junior Lineman Exam Model Paper 6

3. to minimise pollution

4. to minimise the accumulation of dust on the road

78. Compare the statement A and B.
Statement A Blood sugar level falls rapidly after hepatectomy.
Statement B The glycogen of the liver is the principal source of blood sugar.
Select the correct description.

1. Both the statements A and B are correct and B is the reason for A
2. Statement A is correct and B is wrong
3. Statement A is wrong and B is correct
4. Both the statements A and B are correct and B is not the reason for A

79. Name the Indian boxer who has won the gold in 52 kg category in the 73rd Strandja Memorial Tournament in Sofia, Bulgaria ?

1. Preeti Dahiya
2. Nikhat Zareen
3. Neha
4. Simranjit Kaur

80. Who has been appointed as the new head coach of Afghanistan Cricket Board in March 2022 ?

1. Graham Thorpe
2. Ashley Giles
3. Michael Atherton
4. Andrew Caddick

Solution: 1

Model paper 6 key

Electrical Engineering

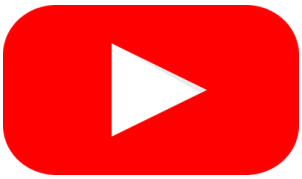
1.2, 2.2, 3.3, 4.2, 5.2, 6.3, 7.2, 8.2, 9.1, 10.3, 11.4, 12.1, 13.1, 14.4,15.1, 16.3, 17.4, 18.3, 19.4, 20.2, 21.4, 22.1, 23.4, 24.1, 25.2, 26.2,27.2, 28.2, 29.3, 30.2, 31.1, 32.4, 33.1, 34.2, 35.4, 36.1, 37.4, 38.1, 39.1, 40.1, 41.4, 42.1, 43.2, 44.3, 45.2, 46.4, 47.2, 48.2, 49.1, 50.4, 51.2, 52.1, 53.4, 54.1, 55.1, 56.2, 57.4, 58.4, 59.3, 60.2, 61.3, 62.4, 63.2, 64.2, 65.3

General knowledge

66.3, 67.4, 68.1, 69.3, 70.2, 71.1, 72.3, 73.3, 74.2, 75.3, 76.4, 77.1, 78.1, 79.2, 80.1

CLICK HERE TO JOIN OUR TELEGRAM CHANNEL

CLICK HERE TO SUBSCRIBE TO OUR YOUTUBE CHANNEL



CLICK HERE TO FOLLOW OUR FACEBOOK UPDATES

CLICK HERE TO FOLLOW OUR INSTAGRAM UPDATES

CLICK HERE TO FOLLOW OUR TWITTER UPDATES

https://thejobjunction.in/